David Moses Hoosier House Furniture 2516 Industrial Park Drive Goshen, IN 46526

Re: Registered Construction and Operation Status, 039-12404-00543

#### Dear Mr. Moses:

The application from Hoosier House Furniture received on June 21, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following wood finishing operation, to be located at 2516 Industrial Park Drive, Goshen, Indiana, is classified as registered:

- (a) Four (4) natural gas furnaces, with a heat input rate of 80,000 Btu/hr each, exhausting to atmosphere;
- (b) One (1) wood finishing line (machining, shaping, drilling, sanding, assembly), with a maximum throughput of 65.241 sq ft/hr, controlled by four (4) dust collectors (DC1 DC4) exhausting internally into the building; and
- (c) One (1) wood finishing spray line (staining, topcoat), with a maximum throughput of 65.241 sq ft/hr; controlled by dry filters exhausting to stack ID S-1.

The following conditions shall be applicable:

- (a) This facility has the potential to emit more than 10 tons of VOC/yr for Elkhart county. Pursuant to 326 IAC 2-6 (Emission Reporting), the owner/operator of this source must annually submit an emission statement of the source to the commissioner. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4. The submittal should cover the twelve (12) month consecutive period starting December 1 and ending November 30 as specified in 326 IAC 2-6-2(8) (Emission Statement Operating Year).
- (b) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minute (sixty (60)) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

- (c) Pursuant to 326 IAC 6-4-2 (Fugitive Emissions), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.
- (d) Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emissions limit for the wood finishing line (consisting of machining, shaping, drilling, sanding, and assembly) shall be determined using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

 $E = 4.10P^{0.67}$  where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

The dust collectors shall be in place at all times the wood finishing line is in operation to comply with this limit.

(e) This source has actual emissions greater than fifteen (15) pounds of VOC per day. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the owner/operator of this source shall apply all coating material, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, using one (1) or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic bell or disc application system, heated airless spray application system, roller coat, brush or wipe application system or dip-and-drain application system.

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

(f) An authorized individual shall provide an annual notice to the Office of Air Management that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

Compliance Data Section Office of Air Management 100 North Senate Avenue P.O. Box 6015 Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

Hoosier House Page 3 of 3 Goshen, Indiana CP-039-12404-00543

This registration is the first air approval issued to this source. The source may operate according to 326 IAC 2-5.5.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief Permits Branch Office of Air Management

# ERG/DG

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Paul Karkiewicz - Northern Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

# Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	Hoosier House Furniture
Address:	2516 Industrial Park Drive
City:	Goshen, Indiana
Authorized individual:	
Phone #:	
Registration #:	039-12404-00543

I hereby certify that Hoosier House Furniture is still in operation and is in compliance with the requirements of Registration 039-12404-00543.

Name (typed):	
Title:	
Signature:	
Date:	

# Indiana Department of Environmental Management (IDEM) Office of Air Management

# Technical Support Document (TSD) for New Construction and Registered Emission Unit

# **Source Background and Description**

Source Name: Hoosier House Furniture

Source Location: 2516 Industrial Park Drive, Goshen, Indiana 46526

County: Elkhart

Construction Permit No.: 039-12404-00543

SIC Code: 2511 Permit Reviewer: ERG/DG

The Office of Air Management (OAM) has reviewed an application from Hoosier House Furniture relating to the construction and operation of a wood finishing process, consisting of the following equipment:

- (a) Four (4) natural gas furnaces, with a heat input rate of 80,000 Btu/hr each, exhausting to atmosphere;
- (b) One (1) wood finishing line (machining, shaping, drilling, sanding, assembly), with a maximum throughput of 65.241 sq ft/hr, controlled by four (4) dust collectors (DC1 DC4) exhausting internally into the building; and
- (c) One (1) wood finishing spray line (staining, topcoat), with a maximum throughput of 65.241 sq ft/hr; controlled by dry filters exhausting to stack ID S-1.

# **Stack Summary**

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S-1	spray finishing	15	3.5	12,950	ambient

#### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 21, 2000, with additional information received on July 6, 2000.

# **Emissions Calculations**

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations (5 pages).

Page 2 of 4 CP-039-12404-00543

Hoosier House Furniture Goshen, Indiana Reviewer: ERG/DG

#### **Total Potential and Allowable Emissions**

Pollutant	Emissions (ton/yr)
PM	24.24
SO <sub>2</sub>	8.41E-04
VOC	17.61
CO	0.12
NOx	0.14
Single HAP	0.43
Combination of HAPs	0.65

- (a) Allowable emissions (as defined in the 326 IAC 1-2-2) of PM and VOC are less than 25 tons per year, but greater than 5 and 10 tons per year, respectively. Therefore, pursuant to 326 IAC 2-1, a registration is required.
- (b) Allowable emissions (as defined in the 326 IAC 1-2-2) of a single hazardous air pollutant (HAP) are less than 10 tons per year and/or the allowable emissions of any combination of the HAPs are less than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, a construction permit is not required.

# **County Attainment Status**

- (a) Volatile organic compounds (VOC) and oxides of nitrogen are precursors for the formation of ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Elkhart County has been classified as attainment or unclassifiable for all other criteria. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

#### **Part 70 Permit Determination**

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Page 3 of 4 CP-039-12404-00543

Hoosier House Furniture Goshen, Indiana Reviewer: ERG/DG

#### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this facility.
- (b) There are no NESHAP 40 CFR Part 63 applicable to this facility.

40 CFR Part 63, Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations

This woodworking operation is not covered by 40 CFR Part 63, Subpart JJ (national Emission Standards for Wood Furniture Manufacturing Operations), because this source is not a major source as defined in 40 CFR Part 63.2

# State Rule Applicability - Entire Source

- (a) (326 IAC 2-6 (Emission Reporting) This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source has the potential to emit more than 10 tons/yr for Elkhart county. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by April 15 or July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.
- (b) 326 IAC 5-1-2 (Opacity Limitations)
  Pursuant to IAC 5-1-2, except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
  - (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period.
  - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minute (sixty (60)) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
- (c) 326 IAC 6-4-2 (Fugitive Emissions)

  The facility shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

# State Rule Applicability - Individual Facilities

(a) 326 IAC 6-3-2 (Process Operations) This rule mandates a PM emissions limit for the wood finishing line (consisting of machining, shaping, drilling, sanding, and assembly) using the following equation:

Page 4 of 4 CP-039-12404-00543

Hoosier House Furniture Goshen, Indiana Reviewer: ERG/DG

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

 $E = 4.10P^{0.67}$  where: E =rate of emission in pounds per hour and P =process weight rate in tons per hour

The dust collectors shall be in place at all times the wood finishing line is in operation to comply with this limit.

(b) 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) The owner/operator of this source shall apply all coating material, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, using one (1) or more of the following application systems: airless spray application system, air-assisted airless spray application system, electrostatic bell or disc application system, heated airless spray application system, roller coat, brush or

wipe application system or dip-and-drain application system.

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

#### **Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 189 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This new source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.
- (b) See attached spreadsheets for detailed air toxic calculations.

#### Conclusion

The construction of this wood finishing operation will be subject to the conditions of the attached proposed Registration No. CP-039-12404-00543.

# Appendix A: Emissions Calculations Natural Gas Combustion Only MM BTU/HR <100 Small Industrial Boiler

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Natural Gas Furnaces (4)

**Company Name: Hoosier House Furniture** 

Address City IN Zip: 2516 Industrial Park Drive, Goshen, IN 46526

Reg: 39-12404 Plt ID: 00543

Reviewer: ERG/DG

Date: 08/04/2000

Heat Input Capacity (per furnace) Potential Throughput (per furnace)

MMBtu/hr MMCF/yr

0.08

#### Pollutant

	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr (per furnace)	0.0027	0.0027	0.0002	0.0350	0.0019	0.0294
Potential Emission in tons/yr (total)	0.0107	0.0107	0.0008	0.1402	0.0077	0.1177

<sup>\*</sup>PM and PM10 emission factors are combined fitlerable and condensable PM and PM10, respectively.

# Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

<sup>\*\*</sup>Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

# Appendix A: Emissions Calculations Natural Gas Combustion Only

# MM BTU/HR <100

Small Industrial Boiler

Natural Gas Furnaces (4)

**HAPs Emissions** 

Company Name: Hoosier House Furniture

Address City IN Zip: 2516 Industrial Park Drive

CP: 39-12404 Plt ID: 00543 Reviewer: ERG/DG

Date: 08/04/2000

# HAPs - Organics

Emission Factor in lb/MMcf	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr (per furnace) Potential Emission in tons/yr (total)	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00

#### HAPs - Metals

Emission Factor in lb/MMcf	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr (per furnace) Potential Emission in tons/yr (total)	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

#### Page 2 of 3 TSD App A

# Appendix A: Emissions Calculations

Particulate Matter Emissions from Woodworking Operations

**Company Name: Hoosier House Furniture** 

Address City IN Zip: 2516 Industrial Park Drive, Goshen, IN 46526

Reg: 39-12404

Plt ID: 00543

Reviewer: ERG/DG

Date: 07/27/2000

# Calculation of PTE, Actual Emissions

Amount of wood collected in baghouses	4.68	lb/hr
Collection effiency	99.00%	
Uncontrolled emissions	4.73	lb/hr
Potential emissions (@8760 hrs/yr)	20.71	tons/yr

# Appendix A: Emissions Calculations

**Particulate Matter Emissions from Woodworking Operations** 

Company Name: Hoosier House Furniture

Address City IN Zip: 2516 Industrial Park Drive, Goshen, IN 46526

Reg: 39-12404

Plt ID: 00543 Reviewer: ERG/DG

Date: 08/04/2000

# Calculation of PTE, Actual Emissions

Amount of wood collected in baghouses	4.68	lb/hr
Collection effiency	99.00%	
Uncontrolled emissions	4.73	lb/hr
Potential emissions (@8760 hrs/yr)	20.71	tons/yr

Page 3 of 5 TSD App A

#### Appendix A: Emissions Calculations VOC and Particulate From Surface Coating Operations

Company Name: Hoosier House Furniture

Address City IN Zip: 2516 Industrial Park Drive, Goshen, IN 46526

Reg: 039-12404 Plt ID: 00543 Reviewer: ERG/DG Date: 08/04/2000

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
n Precat Topcoat	7.58	75.60%	0.0%	75.60%	0.0%	20.13%	7.00E-03	65.241	5.73	5.73	2.62	62.81	11.46	2.77	28.47	25%
Cherry	6.68	89.67%	0.0%	89.67%	0.0%	11.54%	3.05E-04	65.241	5.99	5.99	0.12	2.86	0.52	0.05	51.91	25%
tional Oak	6.50	89.28%	0.0%	89.28%	0.0%	11.00%	2.00E-03	65.241	5.80	5.80	0.76	18.17	3.32	0.30	52.76	25%
intage Economy Lac. Thinner	6.84	100.00%	0.0%	100.00%	0.0%	0.00%	1.53E-04	65.241	6.84	6.84	0.07	1.64	0.30	0.00	0.00	25%
Base	6.50	89.28%	0.0%	89.28%	0.0%	8.38%	1.00E-03	65.241	5.80	5.80	0.38	9.09	1.66	0.15	69.25	25%
t Umber Colorant	13.10	19.60%	0.0%	19.60%	0.0%	43.50%	1.53E-05	65.241	2.57	2.57	2.56E-03	0.06	0.01	0.03	5.90	25%
/led Orange	17.30	10.20%	0.0%	10.20%	0.0%	50.60%	3.82E-06	65.241	1.76	1.76	4.39E-04	0.01	1.92E-03	0.01	3.49	25%
alo Green	8.50	48.00%	0.0%	48.00%	0.0%	50.00%	9.62E-07	65.241	4.08	4.08	2.56E-04	0.01	1.12E-03	9.11E-04	8.16	25%
ond Original Wood Glue	9.16	54.10%	0.0%	54.10%	0.0%	46.00%	2.29E-04	65.241	4.96	4.96	0.07	1.78	0.32	0.21	10.77	25%

#### State Potential Emissions

Add worst case coating to all solvents

4.02 96.43 17.60 3.52

#### METHODOLOGY

nds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)
nds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)
ntial VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)
ntial VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)
ntial VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)
ulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \* (1 ton/2000 lbs)
nds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)

= Worst Coating + Sum of all solvents used

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Appendix A: Emission Calculations HAP Emission Calculations

Surface Coating
Company Name: Hoosier House Furniture

Address City IN Zip: 2516 Industrial Park Drive, Goshen, IN 46526

Reg: 039-12404 Plt ID: 00543

Permit Reviewer: ERG/DG

Date: 08/04/2000

Material	Density	Gallons of Material	Maximum	Weight %	Weight %	Weight %	Weight %	Weight %	Weight %	Weight %	Weight %	Manganese Emissions	Xylene Emissions	Toluene Emissions	Formaldehyde Emissions	Benzene Emissions	Hexane Emissions	Glycol Ethers Emissions	Meth Emis
	(Lb/Gal)	(gal/unit)	(unit/hour)	Manganese	Xylene	Toluene	Formaldehyde	Benzene	Hexane	Glycol Ethers	Methanol	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton/yr)	(ton
Precat Topcoat	7.6	7.00E-03	65.241	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.33	0.00	0.00	0.00	0.00	0.00	I
Cherry	6.7	3.05E-04	65.241	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1
onal Oak	6.5	2.00E-03	65.241	0.00%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.10	0.00	0.00	0.00	0.00	0.00	
tage Economy Lac. Thinner	6.8	1.53E-04	65.241	0.00%	0.00%	52.60%	0.00%	0.00%	0.00%	0.00%	24.00%	0.00	0.00	0.15	0.00	0.00	0.00	0.00	
3ase	6.5	1.00E-03	65.241	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Umber Colorant	13.1	1.53E-05	65.241	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.001	0.00	0.00	0.00	0.00	0.00	0.00	
ed Orange	17.3	3.82E-06	65.241	0.00%	0.00%	5.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
o Green	8.5	9.62E-07	65.241	0.00%	3.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
nd Original Wood Glue	9.2	2.29E-04	65.241	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00	0.00	0.00	0.00	0.00	0.00	I

State Potential Emissions 0.001 0.43 0.15 0.00 0.00 0.00 0.00

# METHODOLOGY

emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

Hapcalc.wk4

Summary of Emissions (tpy)

						Dichloroben Formaldehy							
	PM	PM10	SO2	NOx	VOC	CO	Benzene	zene	de	Hexane	Toluene		
Furnaces	0.0107	1.07E-02	8.41E-04	0.14	7.71E-03	1.18E-01	2.94E-06	1.68E-06	1.05E-04	2.52E-03	4.77E-06		
Woodworking	20.71												
Surface coating\HAPS	3.52				17.60						0.15		
	24.24	1.07E-02	8.41E-04	0.14	17.61	0.12	2.94E-06	1.68E-06	1.05E-04	2.52E-03	1.50E-01		

Max HAP 0.43 Sum HAPs 0.65

Lead	Cadmium	Chromium	Manganese	Methanol	Nickel	Xylene
7.01E-07	1.54E-06	1.96E-06	5.33E-07		2.94E-06	
			0.00114	0.07		0.43
7.01E-07	1.54E-06	1.96E-06	1.14E-03	6.81E-02	2.94E-06	4.32E-01